

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-38 (Cancelled)

39. (New) A method for modulating G-protein mediated signal transduction comprising:

stimulating G protein mediated signal transduction in a cell having a receptor tyrosine kinase, wherein the receptor tyrosine kinase is activated; and  
contacting the cell with a compound which acts on a growth factor precursor in a G protein mediated extracellular signal transduction pathway, thereby modulating the receptor tyrosine kinase activation by G-protein-mediated signal transduction.

40. (New) The method according to claim 39, wherein said receptor tyrosine kinase is epidermal growth factor receptor (EGFR).

41. (New) The method according to claim 39, wherein said growth factor precursor is proheparin-epidermal growth factor (proHB-EGF) and said receptor tyrosine kinase is EGFR.

42. (New) The method according to claim 39, wherein said receptor tyrosine kinase is selected from the group consisting of epidermal growth factor receptor (EGFR), human epidermal growth factor receptor-2 (HER-2), human epidermal

growth factor receptor-3 (HER-3), human epidermal growth factor receptor-4 (HER-4), Tumor Necrosis Factor receptor 1 (TNF receptor 1), Tumor Necrosis Factor receptor 2 (TNF receptor 2), tumor necrosis factor receptor superfamily, member 8 (CD 30) and interleukin 6 receptor (IL-6 receptor).

43. (New) The method according to claim 39, wherein said receptor tyrosine kinase is selected from the group consisting of EGFR and other members of the EGFR family.

44. (New) A method for identifying a test compound for modulating G-protein mediated signal transduction, comprising contacting a cell containing a receptor tyrosine kinase capable of activation by G-protein mediated signal transduction with a test compound suspected of acting on a growth factor precursor which is a ligand of the receptor tyrosine kinase, and evaluating G-protein mediated receptor tyrosine kinase activation upon exposure of the cell to said test compound as an indication of said test compound's ability to modulate G-protein mediated signal transduction thereby identifying a test compound for modulating G-protein mediated signal transduction.

45. (New) A method for modulating a G-protein mediated signal transduction, comprising:

stimulating G protein mediated signal transduction in a cell having a receptor tyrosine kinase, wherein the receptor tyrosine kinase is activated, and wherein said receptor tyrosine kinase is selected from the group consisting of EGFR and other members of the EGFR family, said cell comprising an extracellular EGFR domain and having a G-protein mediated signal transduction pathway wherein one or more tyrosine residues are phosphorylated based on the activation of said G-protein mediated signal transduction pathway, the extracellular domain of said receptor is capable of binding to its receptor ligand, and said ligand is generated from a precursor of said ligand by a proteinase-dependent cleavage; and

contacting said cell with a compound which acts on a growth factor precursor in a G protein mediated extracellular signal pathway and thereby modulating the receptor tyrosine kinase activation by G-protein mediated signal transduction.